



## AviKlen™

Cat. No.: A10210	250 U
Cat. No.: A10211	500 U
Cat. No.: A10212	1000 U

**Store at -20 °C**

Component	A10210	A10211	A10212
Enzyme (5U/ µl)	50 µl	100 µl	200 µl
MgCl <sub>2</sub> 25 mM	0.5 ml	1 ml	2 x 1ml
10X Buffer	0.5 ml	1 ml	2 x 1ml

### Description:

**AviKlen™** has no the N-terminal portion of the gene, encoding *Thermus aquaticus* (*Taq*) DNA polymerase, leaving a highly active and even more thermal stable DNA polymerase activity.

**AviKlen™** has a wide range of optimal MgCl<sub>2</sub> concentration.

The optimal range of Mg<sup>2+</sup> concentration for **AviKlen™** is broader than for the majority of thermostable polymerases.

The mutation rate during polymerization is two-fold lower for **AviKlen™** in comparison with full-length Taq DNA polymerase.

**AviKlen™** is suitable for mutation analysis with mutation-specific oligonucleotides.

It has a very low background ability to extend a mismatched 3'-oligonucleotide end making it suitable for mutation analysis with mutation-specific oligonucleotides. Amplicons are T/A cloning compatible

### Kit storage:

**AviKlen™** should be stored at -20 °C. Under this condition reagents are stable for two years from the date of production.

### General Reaction Protocol:

1. Thaw 10X reaction buffer, dNTP mixture.
2. Mix the master mix thoroughly and dispense appropriate volumes into PCR tubes or plates.

3. Add templates DNA to the individual PCR tubes or wells containing the master mix.

Component	Volume	Final Conc.
10X Reaction Buffer	2 $\mu$ l	1X
MgCl <sub>2</sub> Solution 25mM	2.4 $\mu$ l	3 mM
dNTPs Mix (10 mM each)	0.5 $\mu$ l	0.25mM
Upstream Primer (10 pmol/ $\mu$ l)	1 $\mu$ L	0.5 pmol/ $\mu$ l
Downstream Primer (10 pmol/ $\mu$ l)	1 $\mu$ L	0.5 pmol/ $\mu$ l
Template DNA	Variable	10 fg~1 $\mu$ g
PCR grade water	Variable	-
<b>AviKlen™</b>	0.25 $\mu$ l	
<b>Total Volume</b>	<b>20 <math>\mu</math>l</b>	<b>-</b>

4. Program the PCR machine according to the program outlined.

Cycle	Time	Temp °C
<b>1</b>	4 min	95
	30 sec	94
<b>30-</b>	30 sec	57
<b>35</b>	30-60 sec	72
<b>1</b>	5 min	72

**Notes:**

\* Extension temperature is between 68 and 72 °C. We highly recommend 68 °C for more efficiency of **AviKlen™**.

\* For PCR products longer than 3~4 Kb, use an extension time of approximately 1 min. per Kb DNA.

**Agarose gel Electrophoresis**

Run the total 5-7  $\mu$ L of PCR products alongside 3 $\mu$ L DNA marker on a 2% agarose gel containing Green viewer DNA safe stain.

**Disclaimers and Addresses**

**AviKlen™** is for **research use only** and should only be used by trained professionals.